

REMARKS

General:

The title has been amended to insert the word "Polyoxymethylene" after the word "filled" in the specification for clarity.

Double Patenting Rejection:

Claims 1-9 and 15 are provisionally rejected under the judicially created doctrine of obviousness double patenting as being unpatentable over claims 1-9 and 12 of copending Application No. 10/343,274. Applicant apologizes to Examiner for the confusion in this matter. Application 10/343,274 was a PCT application which was inadvertently filed in the U.S.A. A separate document expressly abandoning Application 10/343,274 has been submitted, thereby removing the double patenting rejection. A copy is enclosed herewith.

Claims 1 and 31-32 are provisionally rejected under the judicially created doctrine of obviousness double patenting as being unpatentable over claims 1 and 10 of copending Application No. 10/343,274. Applicant apologizes to Examiner for the confusion in this matter. Application 10/343,274 was a PCT application which was inadvertently filed in the U.S.A. A separate document expressly abandoning Application 10/343,274 has been submitted, thereby removing the double patenting rejection. A copy is enclosed herewith.

35 USC §103:

Claims 1-9 and 15 are rejected under 35 USC 103(a) as being unpatentable over JP 01170641 in view of Moss (US 4, 608, 372). Applicants believe that the Examiner had a typographical error regarding the patent number (i.e. the Moss patent is "4,608,372" rather than "US 4,608, 378".) Should Applicant's interpretation be incorrect, upon notification of such error, Applicant would be happy to respond accordingly.

Examiner rejects the claims as being unpatentable over JP 01170641 in view of Moss. The Examiner states that Moss discloses use of calcium carbonate with aspect ratio less than 2 in order to impart suitable reinforcing effects to the composition. The Examiner refers explicitly to Moss, Col. 5 lines 21-23. Applicant respectfully disagrees with the Examiner's reading .

Moss is directed to mineral filled but unreinforced films which are said to be soft and tear resistant (Moss, Col 1, line 43). The filled compositions according to Moss are highly stretchable, being capable of biaxial stretching of at least 50%, and at least 100% preferred (Col 3, lines 67-68). Indeed, the actual embodiments in Moss are stretched considerably farther. In Example 1, the film is stretched biaxially 2.5 fold (150%); in Example 2, 3.75 fold (275%). The microporous film of Moss is extremely soft, drapeable, and silky, with good tear resistance. It has none of the properties of a reinforced polymer.

Moss makes it clear that reinforcement is not the goal. In Col 4 lines 55-60, Moss, referring to very fine particulate fillers, states “Most such fillers form extended agglomerated structures with pronounced reinforcing tendencies, an effect specifically to be *avoided* in the practice of the invention because of the *increase in stiffness and decrease in toughness usually associated with such reinforcement.*” (Emphasis added.) Then, in the section quoted by the Examiner, in Col 5 lines 21-23, Moss refers to high aspect ratio fillers as being similar in effect to the extended agglomerated structures which are “specifically to be avoided,” and states “*Just as extended agglomerated structures induce undesirable reinforcing effects, so do fillers having high aspect ratios.* The preferred aspect ratio is less than 2.” (Emphasis added).

In other words, a filler according to Moss, having an aspect ratio of less than 2 will not result in the “undesirable reinforcing effect” of a high aspect ratio filler. Thus, Moss does not teach that reinforcement is achieved by employing aspect ratios of less than 2, but actually teaches that “undesirable reinforcing effects” occur at aspect ratios presumably greater than 2. Following Moss, one of skill in the art would not expect an increase in stiffness when employing fillers with aspect ratio of less than 2.

In fact the statement in Moss on Col 4 line 60 describes the particularly surprising aspect of the present invention, namely, that increased stiffness (as indicated by flexural or tensile modulus) is not achieved at the expense of toughness, that increased toughness is not achieved at the expense of stiffness, and that, in the preferred embodiments of the instant invention, increases in both stiffness and toughness are achieved.

As described above, Moss does not provide an incentive in the art for employing fillers of aspect ratio less than 2 to achieve reinforcement, but rather to avoid undesirable reinforcing effects.

On the other hand, while the disclosures of JP 01170641 encompass compositions of the present invention in regard to filler size, filler loading, and stearic acid content, there is no suggestion in JP 01170641 of Applicant's invention. The

examples in JP 01170641 involve 4 micrometer calcium carbonate, which lies outside claimed limits of the instant invention which is limited to "less than 3.5 micrometers." The examples of JP 01170641 also involve 3 micrometer talc. Talc, is a well-known high aspect ratio so-called "platy" (that is, plate-like) filler of quite high aspect ratio, and is outside the invention with respect to aspect ratio.

There is no suggestion in JP 01170641 of Applicant's invention because the specific embodiments of JP 01170641 lie outside that of the Applicant's invention, and would not be expected to have produced the surprising results of Applicant's invention.

Hence Applicant contends, that there is no suggestion whatever in the art that a combination of Moss and JP 01170641 will lead one of average skill to Applicant's invention. Moss teaches away from the present invention, and JP 01170641 is silent with regard to the surprising properties available from compositions of particle size of 0.1 to less than 3.5 micrometers. In the absence of any suggestion to combine the cited references, Applicant asserts that a *prima facie* case of obviousness has not been made.

In the light of the arguments presented herein, Applicant believes it has been demonstrated that the pending claims are patentably distinguished over the art and thus respectfully requests the Examiner to advance them to allowance.

Please charge to Deposit Account No. 04-1928 (E. I. duPont de Nemours and Company) the one-month extension fee for this response. If this amount is insufficient or incorrect, please charge or credit the above-referenced Deposit Account appropriately.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,



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